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In re Application of

Application Number

08/846,017

Filed

4/25/97

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(12) **United States Patent**
Cech et al.

(10) **Patent No.:** US 6,475,789 B1
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(54) **HUMAN TELOMERASE CATALYTIC SUBUNIT: DIAGNOSTIC AND THERAPEUTIC METHODS**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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Related U.S. Application Data

(63) Continuation-in-part of application No. 08/45,050, filed on May 9, 1997, now Pat. No. 5,743,518, which is a continuation-in-part of application No. 08/851,843, filed on May 6, 1997, now Pat. No. 6,093,809, which is a continuation-in-part of application No. 08/846,017, filed on Apr. 25, 1997, now abandoned, which is a continuation-in-part of application No. 08/844,419, filed on Apr. 18, 1997, now abandoned, which is a continuation-in-part of application No. 08/724,643, filed on Oct. 1, 1996, now abandoned.

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(58) Field of Search 435/366, 320, 435/69.1; 536/23.2; 429/94.1

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,817,837 A	6/1974	Tanenholz et al.	195/103.5
3,850,752 A	11/1974	Schuurs et al.	195/103.5
3,939,350 A	2/1976	Kronick et al.	250/365
3,996,345 A	12/1976	Ullman et al.	424/12
4,275,149 A	6/1981	Litman et al.	435/7
4,277,437 A	7/1981	Maggio	422/61
4,366,241 A	12/1982	Tom et al.	435/7
4,683,195 A	7/1987	Mullis et al.	435/6
4,683,202 A	7/1987	Mullis	435/91
4,816,567 A	3/1989	Cabilly et al.	530/387
4,965,188 A	10/1990	Mullis et al.	435/6
5,489,508 A	2/1996	West et al.	435/6
5,583,016 A	12/1996	Villeponteau et al.	435/91.3
5,747,317 A	5/1998	Cao	
5,770,422 A	6/1998	Collins	
6,258,535 B1	7/2001	Villeponteau et al.	
6,261,556 B1	7/2001	Weinrich et al.	

6,261,836 B1 7/2001 Cech et al.

FOREIGN PATENT DOCUMENTS

JP	09154575 A	6/1997
WO	WO 84/03564	9/1984
WO	WO 95/13382	5/1995
WO	WO 96/01835	1/1996
WO	WO 96/12811	5/1996
WO	WO 96/19580	6/1996
WO	WO 96/40868	12/1996
WO	WO 98/01542	1/1998
WO	WO 98/01543	1/1998
WO	WO 98/08938	2/1998
WO	WO 98/07838	3/1998
WO	WO 98/21343	5/1998
WO	WO 98/37181	8/1998
WO	WO 98/45450	10/1998

OTHER PUBLICATIONS

Johnson et al., Mol. Cell. Biol. 1991, vol. 11, pp. 1-11.* Counter et al., Proc. Natl. Acad. Sci. 1994, vol. 91, pp. 2900-2904.*

Zakian, "Telomeres: Beginning to Understand the End," Science 270:1601 [1995].

Blackburn and Gall, "A tandemly repeated sequence at the termini of the extrachromosomal ribosomal RNA genes in Tetrahymena," J. Mol. Biol., 120:33 [1978].

Oka et al., "Inverted terminal repeat sequence in the macro-nuclear DNA of *Styloynchia pustulata*," Gene 10:301 [1980].

Klobutcher et al., "All gene-sized DNA molecules in four species of hypotrichs have the same terminal sequence and an unusual 3' terminus," Proc. Natl. Acad. Sci., 78:3015 [1981].

Lingner et al., "Telomerase RNAs of different ciliates have a common secondary structure and a permuted template," Genes Develop., 8:1984 [1994].

Biessmann et al., "Addition of Telomere-Associated HeT DNA Sequences "Heals" Broken Chromosome Ends in Drosophila," Cell 61:663 [1990].

Sheen and Levis, "Transposition of the LINE-like retrotransposon TART to Drosophila chromosome termini," Proc. Natl. Acad. Sci., 91:12510 [1994].

Kipling and Cooke, "Hypervariable ultra-long telomeres in mice," Nature 347:400 [1990].

(List continued on next page.)

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(57) ABSTRACT

The invention provides compositions and methods related to human telomerase reverse transcriptase (hTRT), the catalytic protein subunit of human telomerase. The polynucleotides and polypeptides of the invention are useful for diagnosis, prognosis, and treatment of human diseases, for changing the proliferative capacity of cells and organisms, and for identification and screening of compounds and treatments useful for treatment of diseases such as cancers.